CLAIMS

1. A method for ammonia-mediated reduction of nitrous oxide comprising contacting a gas stream containing the nitrous oxide and ammonia with a catalyst composition comprising a zeolite.

2. A method as recited in claim 1, wherein the gas stream containing nitrous oxide and ammonia has a temperature of greater than about 250°C.

3. A method as recited in claim 1, wherein the gas stream has a temperature of from about 350°C to about 600°C.

4. A method as recited in claim 1, wherein the gas stream has a temperature of about 450°C to 550°C.

5. A method as recited in claim 1, wherein the ammonia/ N2O concentration ratio is up to about 2.0 based on the total volume of the gas stream.

6. A method as recited in claim 1, wherein the ammonia/ N_2O concentration ratio is at least about 0.5 based on the total volume of the gas stream.

7. A method as recited in claim 1, wherein the ammonia/ N_2O concentration ratio is from about 0.8 to about 1.0 based on the total volume of the gas stream.

8. A method as recited in claim 1, wherein the zeolite is selected from the group consisting of BETA, ZSM, MORD and Y.

9. A method as recited in claim 1, wherein the zeolite is zeolite Beta.

10. A method as recited in claim 1, wherein the zeolite is ion- exchanged with at least one type of ion selected from the group consisting of Fe, Cu, Co, Ce, Pt, Rh, Pd, Ir, Mg and combinations thereof.

11. A method as recited in claim 1 wherein the zeolite is ion-exchanged with at least one type of ion selected from the group consisting of Fe, Ce, Cu, Co and combinations thereof.

12. A method as recited in claim 1, wherein the N_2O concentration of the gas stream is about 1% or less.

13. A method as recited in claim 1, wherein the N_2O concentration of the gas stream is about 5000 ppm or less.

14. A method as recited in claim 1, wherein the N_2O concentration of the gas stream is between about 20 ppm and about 5000 ppm.

15. A method as recited in claim 1, further comprising contacting the gas stream with a catalyst composition selective for the removal of NO_x.

16. A method as recited in claim 15, wherein the catalyst selective for the removal of NO_x has the same composition as the catalyst selective for the reduction of nitrous oxide.

17. A catalyst composition for ammonia-mediated removal of N_2O from a gas stream comprising a catalyst selective for the reduction of N_2O.

18. A method for ammonia-mediated N_2O and NO_x reduction, comprising contacting a gas stream containing ammonia with a catalyst composition having an upstream catalyst and a downstream catalyst sensed relative to the sequence of flow of the gaseous stream through the catalyst wherein one catalyst is selective for the reduction of N_2O and the other catalyst is selective for the reduction of NO_x.

19. A method as recited in claim 18, wherein the upstream and the downstream catalysts have the same composition.

20. A method as recited in claim 18, wherein the upstream catalyst is selective for the reduction of N_2O and the downstream catalyst is selective for the reduction of NO_x.

21. A method as recited in claim 18, wherein the upstream catalyst is selective for the reduction of NO_x and the downstream catalyst is selective for the reduction of N_2O.

22. A catalyst composition for ammonia-mediated N_2O and NO_x reduction comprising at least two zones, at least one of the zones comprising a catalyst material selective for the reduction of NO_x and at least one other zone comprising a catalyst material selective for the reduction of N_2O.

23. A catalyst composition as recited in claim 22, wherein at least two zones have the same catalyst composition.

24. A catalyst composition as recited in claim 22, wherein the catalyst composition has two zones, each having the same catalyst composition.